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- 5           1. Financial instrument image and data exchange method, comprising:  
                  electronically copying, into an entry of an image exchange network, a digital image  
                  and a digital data record from a financial instrument processing system for a  
                  first financial institution after it is determined that the digital data record  
                  identifies a second financial institution; and  
                  communicating through the image exchange network, in real time with copying the  
                  digital image and the digital data record into the entry, the copied digital  
                  image and digital data record for use on behalf of the identified second  
                  financial institution.
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                  within a variable group of financial institutions, capturing at respective sites digital  
                  images and digital data records for financial instruments processed at the  
                  respective sites; and  
                  exchanging, through a computer system communicating with the respective sites and  
                  in real time with capturing the digital images and digital data records, the  
                  digital images and digital data records with respective ones of the financial  
                  institutions identified in the digital data records.
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                  capturing at a first time financial instrument image signals and raw data signals as  
                  the financial instrument image signals and raw data signals are created at a  
                  financial instrument processing site for a first financial institution; and  
                  transmitting, at a second time subsequent to but concurrent with the first time, the  
                  captured financial instrument image signals and raw data signals through an

image exchange computer network connected to the financial instrument processing site for the first financial institution and a financial instrument processing site for a second financial institution such that real time image exchange at capture is provided between the first and second financial institutions.

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4. A method as defined in claim 3, wherein capturing includes storing the financial instrument image signals and raw data signals in a computer of the image exchange computer network, the computer connected to receive from the financial instrument processing site for the first financial institution, as the financial instrument image signals and raw data signals, signals responsive to outputs of a MICR reader and an optical scanner of the financial instrument processing site for the first financial institution.

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5. A method as defined in claim 4, wherein transmitting includes sending the stored financial instrument image signals and raw data signals to a central computer of the image exchange computer network, detecting the identity of the second financial institution in the raw data signals sent to the central computer, and sending the signals to a further computer of the image exchange computer network in communication with the identified second financial institution.

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6. A method as defined in claim 3, wherein transmitting includes sending the financial instrument image signals and raw data signals to a central computer of the image exchange computer network, detecting the identity of the second financial institution in the raw data signals sent to the central computer, and sending the signals to a computer of the image exchange computer network in communication with the identified second financial institution.

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7. A method of providing real time image exchange at time of capture of a digitization  
of a financial instrument image at a financial instrument processing site, comprising:  
  
receiving at a computer, concurrently with a digitized financial instrument image  
being created from a financial instrument processed at a processing site for a  
first financial institution, digital signals representing the digitized financial  
instrument image and data contained on the financial instrument;  
  
5 determining in the computer, concurrently with said receiving and in response to  
received digital signals representing data contained on the financial  
instrument, an identification of a second financial institution; and  
  
communicating, concurrently with said determining, digital signals representing at  
least the digitized financial instrument image from the computer for use by  
the second financial institution.

8. A method as defined in claim 7, wherein receiving digital signals includes receiving  
the digital signals in an item exchange server connected to an item processing system at the  
processing site for the first financial institution.  
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9. A method as defined in claim 8, wherein communicating includes transmitting the  
received digital signals to an item processing system at a financial instrument processing site for the  
second financial institution.

10. A method as defined in claim 7, wherein communicating includes transmitting the  
20 received digital signals to an item processing system at a financial instrument processing site for the  
second financial institution.

11. A method of communicating electronic images of tangible financial instruments between financial institutions where tangible financial instruments are first received and financial institutions purportedly having an obligation under the received tangible financial instruments, the method comprising:

- 5 creating electronic images of tangible financial instruments received at a first financial institution;
- concurrently with creating the electronic images, storing the created electronic images in a first client image exchange server, the first client image exchange server operatively associated with the first financial institution;
- 10 concurrently with storing the created electronic images, sending signals encoded to represent at least one of the stored electronic images and to identify a second financial institution to a central image exchange server; and
- 15 sending the encoded signals from the central image exchange server to a second client image exchange server, the second image exchange server operatively associated with the second financial institution.

12. A method as defined in claim 11, wherein the tangible financial instruments include bank checks and wherein creating electronic images includes optically scanning the bank checks.

13. Financial instrument image and data exchange method, comprising:

processing financial instruments received by a depositing financial institution,  
including: creating respective digital images and related raw data records  
from information encoded on the respective financial instruments,  
determining which raw data records identify paying financial institutions  
such that the respective financial instruments for which paying financial  
institutions are identified are real-time exchange eligible instruments, and  
correcting respective raw data records;

electronically real-time copying to a central exchange server the respective digital  
images and related raw data records for the real-time exchange eligible  
instruments;

for each electronically copied digital image and related raw data record, determining  
in the central exchange server the identity of the respective paying financial  
institution and electronically copying the respective digital image and raw  
data record to a client exchange server for that paying financial institution;

transmitting corrected raw data records to the central exchange server, and from the  
central exchange server to the client exchange server for the respective  
paying financial institution identified in a respective corrected data record;  
and

copying each digital image and the related corrected data record from the client  
exchange server for the respective paying financial institution to an item  
processing system for that paying financial institution such that the item  
processing system responds thereto as if the original processing of the

1183039\_1

respective financial instruments for that paying financial institution had  
occurred in the item processing system for that paying financial institution.

14. A method as defined in claim 13, wherein creating respective digital images and  
related raw data records includes processing checks through a check sorter of an item processing  
5 system for the depositing financial institution, including processing checks through a MICR line  
reader of the check sorter and through an optical scanner of the check sorter.

15. A method as defined in claim 14, wherein electronically real-time copying to a  
central exchange server includes communicating to the central exchange server digital signals  
responsive to output from the MICR line reader and the optical scanner.

1183039\_1

16. A method of processing a tangible bank check having MICR information and drawn on a customer's account at a payor bank, comprising:

receiving the bank check at a bank of first deposit different from the payor bank;  
creating electronic data for the bank check in response to at least part of the MICR  
information on the bank check and concurrently creating an electronic image  
of the image of the bank check; and

in real time with creating the electronic data and image:

transmitting the electronic data and electronic image to a first client image exchange server operatively associated with the bank of first deposit;  
transmitting the captured electronic data and electronic image from the first client image exchange server to a central image exchange server; and  
transmitting the electronic data and electronic image from the central image exchange server to a second client image exchange server, the second client image exchange server operatively associated with the payor bank.

17. A method as defined in claim 16, further comprising transmitting at least the electronic data in the second client image exchange server to an item processing system of the payor bank when the electronic data contains correct data.

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18. Financial instrument capture emulation method, comprising providing to an item processing system for a receiving financial institution, in response to and concurrently with processing a financial instrument in an item processing system for a sending financial institution, a digital image of and a digital data record for the financial instrument, including providing the digital image and the digital data record in compatible form for the item processing system for the receiving financial institution such that the item processing system for the receiving financial institution processes the provided digital image and digital data record as if originally captured in the item processing system for the receiving financial institution.

19. A method as defined in claim 18, wherein the financial instrument is a bank check processed through a check sorter of the item processing system for the sending financial institution.

20. A method as defined in claim 19, wherein providing the digital image and digital data record to the item processing system for the receiving financial institution further includes communicating copies of signals from the check sorter through an image exchange computer network connected to the item processing system for the sending financial institution and the item processing system for the receiving financial institution.

21. A method as defined in claim 18, wherein providing the digital image and digital data record to the item processing system for the receiving financial institution further includes communicating signals defining the digital image and digital data record through an image exchange computer network connected to the item processing system for the sending financial institution and the item processing system for the receiving financial institution.

22. Financial instrument image and data exchange system, comprising:

means for capturing a digital image and a digital data record from a financial instrument processing system for a first financial institution at the time it is determined that the digital data record identifies a second financial institution; and

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means for communicating, in real time with capturing the digital image and the digital data record, the captured digital image and digital data record for use on behalf of the identified second financial institution.

23. An image exchange system for financial instruments, comprising:

a plurality of financial institution item processing systems, each having a sorter that receives tangible financial instruments and provides received tangible financial instruments to MICR detecting equipment and optical imaging equipment of the sorter;

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a plurality of client image exchange servers, each connected by a respective communication link to obtain data and image signals responsive to the MICR detecting equipment and optical imaging equipment of at least one of the financial institution item processing systems; and

a central image exchange server connected to the client image exchange servers such that the central image exchange server mediates real-time transfers of at least image signals between respective ones of the client image exchange servers.

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